THE INFLUENCE OF THE GOLD SUPPLY ON PRICES AND PROFITS

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MACMILLAN AND CO., LIMITED
ST. MARTIN'S STREET, LONDON
1913

RICHARD CLAY AND SONS, LIMITED,
BRUNSWICK STREET, STAMFORD STREET, S.E., AND
BUNGAY, SUFFOLK.

PREFACE

The increase in the yearly production of Gold and the rise in Prices which have occurred in recent years have led to a renewal of the controversy as to the influence of Money on Prices.

One party to this controversy holds that, under modern conditions, the Quantity of Money has a very slight and negligible influence on Prices, which are mainly determined by Credit. Their opponents hold that the Quantity of Money has a substantial influence on Prices, and assert that, "other things being equal, the general level of Prices is determined by the Quantity of Money:" they admit that during any portion of time which may be chosen the "other things" which are assumed to be equal in the statement of the Quantity Theory may vary in such manner as to exercise a material influence on Prices.

I propose in the present work to show in what

way the Quantity of Money affects Prices, and to explain the limitations involved in the assumption that "other things are equal." In doing so I cannot avoid dealing with the relation between Credit and Prices, and must, of course, refer to the Quantity Theory, but I do not discuss the latter Theory fully or at great length. In my opinion its soundness, subject to certain limitations, is beyond question and the controversy ought to be closed.

I also propose to call attention to the great economic influence exercised by a general Rise in Prices due to an increase in the Quantity of Money, and by a general Fall in Prices due to the opposite cause. This influence is so profound and far-reaching that it often leads to important social and political changes.

I have always dreaded the proposals of the Inflationists who hope to increase real wealth indefinitely by mere additions to the Currency, but I find myself driven by the logic of facts into holding that the question of the influence of the Quantity of Money is one of the first importance in the present day, and will be of increasing importance as time rolls on.

I have seen the fall in the Prices of agricultural

produce stimulate the Land Agitation in Ireland, and the Land Agitation put new life into the Home Rule Movement which has plunged the country into a sea of difficulties. The fall in the Prices of agricultural produce was very largely due to foreign competition, but if that competition had coincided with a great increase in the supply of Gold instead of with a great increase in the demand for it, the claim for the reduction of rents would have been weakened.

I have seen many of the Irish peasants purchase their holdings when the rents had been reduced owing to the fall in Prices, and do so with the assistance of the Public Credit, when that Credit was at its highest owing to the reduction in the rate of profit caused by the general fall in Prices.

Prices are now rising and loans cannot be obtained on as easy terms as formerly, even though the Credit of the British Government be pledged.

Similar purchases, whether in Ireland or elsewhere, could not be made in the present day on the same terms, nor, possibly, with equally satisfactory results.

I have seen Protection flourish in Foreign

Countries and Fair Trade make great progress in England while Prices were falling, and I have seen Protection discredited in those Countries, and Tariff Reform wither in England under the influence of rising Prices. The growth of the Public Revenue reduces the difficulty which Governments would otherwise experience in meeting the liberal scale of expenditure which prevails in the present day, and Ministers of Finance build up reputations on results which are due to the increased production of Gold.

These are merely examples of the profound and subtle influence which the Standard of Value can exercise on human affairs.

A general Fall in Prices sets up stresses in the social fabric which search out the weak points in the structure. A general Rise in Prices smooths away many difficulties, but may create others. The increase in the cost of living, as measured in Money, is an important element in the Labour Unrest at the present moment and Legislation is invoked to adjust Wages to Prices.

I put forward no proposals for a remedy. I merely state the conclusions at which I have arrived, in the hope that others may be induced

to turn their attention to the subject, and that unanimity on the theoretical aspects of the question may be obtained before the difficulties arise which seem likely to occur in the future, though not, so far as I can see, in the immediate future.

I should feel relieved if it could be shown that my apprehensions were groundless.

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ERRATUM.

Page 58, line 18, *for* "Rupee," *read* "proper."

THE INFLUENCE OF THE GOLD SUPPLY ON PRICES AND PROFITS

CHAPTER I

PRELIMINARY REMARKS

Before attempting to investigate the manner in which Gold acts on Prices, under modern conditions, it is expedient to make a few remarks.

In the first place I shall assume, unless the contrary is stated or is apparent from the context, that the countries with which I am dealing make use of the Gold Standard.

Gold acts on Prices by being used as Money, and I shall define Money as including both Gold coins of full weight and also Monetary Gold, the latter term denoting uncoined Gold held in Banks as a reserve and which can be coined at any time if necessary.

In the term Money, as ordinarily used, a number of things are included which are not of

the same nature, and if we are to avoid error and confusion it is essential to attach a definite meaning to the word beforehand and to adhere consistently to that meaning. I recognise that Token Coins and Paper Currency are commonly known as Money, and that what is called Money in the Money Market is something of a totally different nature, but for the purposes of my argument I do not include these under the term Money.

Most of the errors which are committed in discussions regarding the Standard of Value are due to the fact that in ordinary life we measure the Values of all other things by reference to Money, and thus fall into the habit of treating Money as if it had an inherent or intrinsic Value. This error is fundamental and has obtained such a hold upon our minds that it is almost impossible for anybody to discard it so completely that he shall run no risk of falling into it at unguarded moments. Value in Political Economy means Value in Exchange, and the Value of anything as compared with anything else is simply the *ratio in which it will exchange for that other* thing, and no article can possess inherent or intrinsic Value. If the value of A changes in relation to B, the value of B changes at the same time in relation to A in the same degree but in the opposite direction.

It is sometimes said that the Value of Gold

has changed and that, as a consequence, Prices have risen or fallen, as the case may be, the assumption being that it was a prior change in the Value of Gold which caused the change in Prices.

This mode of expression is misleading, as there is not a quality of Value inherent in Gold which by its alteration causes Prices to rise or fall. It is the rise or fall in Prices which constitutes the alteration in the Value of Gold, and the Value of Gold in relation to any commodity has not changed unless, and until, the Price of that article has risen or fallen.

It will be shown hereafter, however, that an alteration in the Prices of some articles, if due to an increase or decrease in the Quantity of Money, does, under the operation of economic forces, bring about an alteration in the Prices of other articles. For example, if A and B, under economic influences, exchange against each other in a certain ratio their respective prices will conform to that ratio, and if the price of one of them rises owing to an increase in the Quantity of money such rise in price will necessarily be followed by a corresponding rise in the price of the other. In this sense it may be said that the Value of Gold having altered in respect to A its Value will also be altered in regard to B; this result would not be due to an alteration in an intrinsic or inherent Value in Gold but would be

brought about by the existence of a ratio of exchange between A and B determined by economic considerations.

Let us now consider what is meant by "Price."

If a farmer sells a bullock for £20 he is entitled to receive from the purchaser twenty golden sovereigns and, practically, that means that he is entitled to receive the amount of Gold contained in twenty sovereigns. He may, however, take a cheque on a Bank for £20, and he may pay the cheque into a Bank with which he has an account. Subsequently, when he makes a purchase he may transfer the claim to the £20 which is at his credit in the Bank, to the person from whom he made the purchase. In such a case he will not have handled, or even seen, the Gold to which he had a claim, and which claim he afterwards transferred to another person. But if he had chosen to do so he might have demanded twenty sovereigns from the purchaser, or he might have demanded twenty sovereigns from the Bank at which the cheque which he received was payable. And the person to whom he transferred his claim might have taken the cheque which he received to the Bank upon which it was drawn and demanded twenty sovereigns from that Bank.

We thus see that, in buying and selling, Gold in the form of sovereigns (commonly expressed

as Pounds Sterling) is used as a Measure of Value, and may be so used to effect the exchange of commodities for commodities without any Gold passing from hand to hand, but always subject to the condition that the person who sells an article may insist on being paid in Gold by the purchaser, or, if he accepts a cheque, may insist upon being paid in Gold by the Bank on which the cheque is drawn. Gold is, therefore, something more than a mere abstract Standard of Value which is used to express the relations in which commodities will exchange for each other. The quantity of Gold which is assumed to represent the Value of an article that is being sold may be demanded from the purchaser, is always liable to be demanded, and sometimes is demanded.

When a man possesses Gold and wishes to exchange it for commodities, he makes the exchange in accordance with the scale of market Prices.

If he wishes to obtain Gold for use in the Arts, for hoarding, or for any other purpose, the commodity he parts with in order to obtain Gold is valued at the market Price, and the quantity of Gold he receives corresponds with that Price.

Prices may be used as a convenient means of expressing the ratio in which commodities will exchange for commodities, and generally are

so used,[1] but the scale of Prices always represents the actual Value of commodities as compared with Gold, and the man who wishes to exchange Gold for commodities or commodities for Gold, must make the exchange in accordance with Market Prices. The persons who extract Gold from the Mines exchange that Gold for commodities, in one way or other; the Gold that is used in the Arts is obtained by exchanging commodities for Gold; the Gold that is hoarded in India and elsewhere is obtained in exchange for commodities; the Gold that is passed from hand to hand in buying and selling, and the Gold that is moved from one Bank to another or from one Country to another, is one of the articles which are included in the World's system of exchanges.

Money is, therefore, not an abstract, or nominal, Measure of Value, but represents a definite quantity of a metal called Gold, which metal is continually being exchanged against other things.

[1] It was no doubt in reliance on this use of prices that Lord Castlereagh said in 1811 "that a pound might be defined as a sense of value in reference to currency as compared with commodities."

CHAPTER II

ALTERATIONS IN RELATIVE PRICES AND THE DISTRIBUTION OF GOLD THROUGHOUT COUNTRIES USING A GOLD CURRENCY DETERMINED BY ECONOMIC INFLUENCES.

"Gold and Silver having been chosen for the general medium of circulation they are by the competition of commerce distributed in such proportions amongst the different countries of the world as to accommodate themselves to the Natural Traffic which would take place if no such metals existed, and the trade between countries were purely a trade of barter."

In this passage two principles of great importance are laid down by Ricardo. Trade is stated to be carried on as if under a system of barter: in other words, the ratios in which commodities exchange for commodities are determined by economic considerations and are independent of the Standard of Value and of the particular form of Currency which may happen

to be in use. The Price of each article rises or falls under the operation of economic influences; Prices, therefore, bear such relations to each other as economic considerations require.

I do not consider it necessary to spend time in proving the truth of this proposition. It is almost self-evident and, so far as I know, it has never been challenged by any Economist. It does not mean, of course, that Prices are always in exact accordance with economic influences, for Prices are determined by human beings who are liable to make mistakes. But there are influences at work which tend to correct such mistakes, and Prices always tend to be regulated by economic considerations.

In buying and selling, all transactions are expressed in Prices, and it follows from what has just been said that Prices move in such manner as to ensure that the exchange of commodities for commodities shall be carried on in accordance with the play of economic forces. If the supply of any commodity falls off its Price rises. In other words, a smaller quantity of it will exchange for the same quantity of any other article. Its Price has moved in obedience to an economic force and the rise in Price represents exactly the alteration of the ratio in which it exchanges for other things.

The scale of Prices which prevails at any

moment represents the ratio in which commodities exchange for each other.[1]

If Silver were used as the Standard of Value instead of Gold, Prices would bear the same relation to each other as Prices stated in Gold do. The quantity of metal changing hands, or supposed to change hands, in each transaction would be greater; the proportions between the quantities of metal in each case would be the same.

The second proposition which Ricardo lays down is to the effect that Gold and Silver having been chosen as the general medium of circulation they are distributed by the competition of commerce amongst the different countries of the world in such proportions as are required. Ricardo speaks of Gold and Silver as the general medium of circulation. At the time at which he wrote, Gold and Silver were used as Currency under what has been called a Bimetallic system, and, practically, the same ratio of Value was maintained between the two metals, so that for the purpose which Ricardo had in view they might be treated as one. This is the case no longer, and as all the chief nations of the world now use Gold alone as the Standard of Value it will be convenient to substitute Gold for Gold

[1] The reader should bear in mind that commodities exchange for each other by quantity in the inverse ratio of their Prices. The higher the price of an article the smaller is the quantity of it which will exchange for the same quantity of other things.

and Silver in dealing with Ricardo's proposition, and this is the course which I shall adopt.

It will be obvious that no man engaged in business, and no Bank, will keep more Gold in hand than is held to be necessary for business purposes. To do so would amount to neglecting an opportunity to make a profit. Gold may be considered to be Capital and affords the easiest means of obtaining other forms of Capital, and to keep Capital lying idle is wasteful. On the other hand no Bank and no business man could afford to keep less Gold in hand than is required for business purposes. As a consequence, everybody engaged in business is careful to see that his supply of Gold is adjusted to his wants and is neither greater nor less than he requires. If every person so manages his affairs that his supply of Gold is equal, and not more than equal, to his wants, the supply of Gold throughout the world must be so adjusted from time to time as to be just sufficient for the wants of every place where Gold is required. The adjustment is made in accordance with the interpretation of these wants by men of business who are possessed of great experience in such matters, and whose interest it is to come to a sound decision and to keep only the exact amount of Gold which they need.

Under modern conditions the trader depends upon his Bank to keep a sufficient supply of Gold,

and every Banker who finds his stock of Gold falling below what he considers safe, takes steps to stop the drain, and, if necessary, to add to his reserves.

If the Banker holds a larger amount of Gold than he considers necessary he extends his business until the excess is absorbed.

The exports of each country, and the claims it may have against other countries, are set off against its imports and the claims on other accounts which foreign countries may have against it. And if there is an unfavourable balance against any country the Rate of Exchange falls; this fall stimulates exports and checks imports, and if equilibrium is not thereby restored, the Rate of Exchange must continue to fall until it becomes profitable to export Gold: if necessary, this export of Gold must continue until there is such a fall[1] in Prices in the country against which there was an unfavourable balance, and such a rise of Prices in foreign countries, that equilibrium is restored by still further increasing exports and diminishing imports. What I have just explained is a necessary consequence of the law that the exchange of commodities for com-

[1] The fall in prices or rise in prices, as the case may be, is due to the fact that Bankers adjust their business to the quantity of Gold which they hold. They will neither allow Gold to lie idle nor run the risk of carrying on their business with insufficient cash. I need hardly say that if the Gold imported into a country is hoarded, it produces no effect on prices in that country.

modities is regulated by the play of economic forces, because this result can only be secured by a proper adjustment of the respective scales of Prices in all countries that have commercial and financial relations with each other.

If the one country has a Gold Standard and the other has a Silver Standard, or makes use of inconvertible paper, this flow of the material of the Standard from one country to the other becomes impossible, and the adjustment of the balance of indebtedness between them must be effected by an alteration in the Rate of Exchange, and cannot be brought about by an export of the current Money with a consequent adjustment of the scales of Price in the two countries. The fall in Exchange must, in such cases, be carried out to any extent that may be necessary, and involves a corresponding "depreciation" of the Currency of the one country as compared with that of the other. I do not overlook the fact that a temporary adjustment of the balance of indebtedness may be effected by one country incurring debt to the other or transferring securities to it, but such a temporary adjustment in no way supersedes the necessity that the scales of prices in the two countries must, sooner or later, bear the due economic relation to each, and that due relation must, sooner or later, be brought about by a general rise or fall in relative prices, if the two countries use the same Standard of Values. The incurring

of debt or the transfer of securities from the debtor to the creditor country can only produce a temporary equilibrium. Such methods of paying a balance really make the permanent position of the debtor country worse than it was, since the incurring of debt or the transfer of securities makes it necessary to increase exports in future years.

It will thus be seen that when countries have the same Standard of Value, alterations in Prices and fluctuations in the Rate of Exchange provide the means by which the exchange of commodities for commodities is carried on in accordance with economic influences, and that there is a natural process by which Gold, when that metal is used as Currency, is automatically distributed throughout all Gold Standard countries in such proportions as may be required in each place.

When the countries have different Standards of Value, the respective scales of Prices in the two countries cannot be so adjusted as to conform to economic requirements, and equilibrium is secured by an alteration in the relative Value of the two Monetary Standards.

If the two countries have Gold as the Standard of Value, but one of them, as in India in the present day, does not use Gold as Currency, the adjustment of the scales of Price is not automatic, and artificial means, which I need not explain in this place, must be adopted to secure that result.

CHAPTER III

THE QUANTITY THEORY OF MONEY

It will be admitted that an increase in the Quantity of Money must cause some rise in Prices, unless the increase is counteracted by some other cause, and as the exchange of commodities for commodities is regulated by economic considerations, and carried out in practice by alterations in Prices, the rise in Prices due to an increased Quantity of Money must, when the rise is completed, be in the same proportion in the case of each commodity; if this were not the case the ratios in which commodities exchanged for each other would be altered in such a way that exchange of commodities for commodities would no longer take place in accordance with economic influences. Nor does it seem to me to be possible to suppose that any other law regulates the rise of Prices when the Quantity of Money is increased than that which asserts that the rise in Prices is proportional to the increase in the Quantity of

Money, if other things are equal. The influence of an increase in the Quantity of Money, other things being equal, must be regulated by some law and cannot be haphazard, and it seems to be impossible to substitute any other law for that of the Quantity Theory.

In the present work I have set myself the task of explaining the method in which Gold affects Prices, and I do not propose to set forth all the arguments which can be employed in support of the Quantity Theory. They will be found elsewhere and I need not repeat them, though I shall find it necessary to call attention to the very important limitations of that Theory which are due to the condition that other things must be assumed to be equal.

Some persons have supposed that an increase in the Quantity of Money caused a direct and general increase in real wealth, but this is not the case. By increasing the Quantity of Money you can raise Prices, and the Value of the wealth of a country *measured in Gold* will show an increase, but the real wealth will be just the same as before, except in so far as Gold may be required for purposes other than that of Currency, and Gold will have fallen in Value in exact proportion to the rise in Prices.

A large increase in the production of Gold may cause a special disturbance of Prices in the country where it is produced, and a further disturb-

ance in the countries where it begins to be used as Money, but, as we have already seen, forces are at work which distribute the Gold in due proportion over all countries which make use of a Gold Standard and Currency. When the adjustment of Prices has been completed business will go on as before. What happens in such a case is analogous to what occurs when a large quantity of water is suddenly poured into a lake. There is a great disturbance and a higher water level at the point of entry, but natural forces quickly distribute the water all over the lake and raise its general level.

When it is said that a rise in Prices due to an increase in the Quantity of Money does not increase the real wealth of the world, the statement must be understood to be limited by the condition that the corresponding adjustments of Prices and fixed money payments have been fully carried out throughout the commercial, industrial, and financial world. Until that is the case an increase or decrease in Prices due to an increase or decrease in the Quantity of Money may, indirectly, have important economic effects as I shall endeavour to show hereafter.

As I have already said, I do not propose to repeat the arguments in support of the Quantity Theory of Money; they are available to the student in other works and I could add nothing to what has already been said on the subject.

The argument, and in my opinion the sole argument which is even plausible, that has been employed in attacking the Quantity Theory is based on the great development of Credit in modern times. Prices, it is said, are determined mainly by Credit, and the increase or decrease in the Quantity of Money has little or no effect on them.

An Economist, of some eminence, has even gone so far as to assert that Money *is* Credit, that Credit has the same influence on Prices as Money, quantity for quantity, and that as the quantity of Credit in the United Kingdom is £6,000,000,000[1]—and the quantity of Gold only £100,000,000, any considerable alteration in the Quantity of Money could only affect Prices in a very slight degree, so that even if the Quantity of Money were doubled the increase in prices would only be in the proportion of 6,100,000,000 to 6,200,000,000 or as 61 to 62, being 1·6 per cent.

The assertion that Money *is* Credit is a contradiction in terms, and needs no special notice. Such a proposition can only be supported by perverting the natural meaning of language.

[1] In another place the same Economist puts the amount of Credit at £10,000,000,000—instead of £6,000,000,000—and the amount of Gold at £120,000,000 instead of £100,000,000. The discrepancy is large but the precise figures are of no importance in dealing with the general argument. The amount of Credit as estimated for the purpose of the argument is, in any case, enormously in excess of the amount of Gold.

The question of the relative influence of Money and Credit on Prices I shall deal with at some length, as there are writers on Currency Questions other than the Economist to whom I have just referred, who hold that Money has very little influence on Prices in the present day, though I believe, that none of them supports the theory which that Economist propounded on this subject.

Clear views regarding the relations between Credit and Money are essential in dealing with the limitations to the working of the Quantity Theory in practical life.

CHAPTER IV

THE MODERN SYSTEM OF CREDIT

The word Credit has many shades of meaning and it is necessary to make clear in what sense it is used when we speak of Credit as contrasted with Money. On turning to the Dictionary I find that Credit is explained to mean Belief, Credence, Trust, Faith; if we examine the use of the word in the daily business of the world we find that it is correctly employed, the essential fact being that, under a system of Credit, men part with valuable property without at the same time receiving something of equivalent Value, and are content to accept a promise that an equivalent will be forthcoming at a future date. They *trust* the persons with whom they are dealing in the *belief* that they will fulfil their promises at the appointed time.

The giving of Credit in this way is not a modern invention, and prevails even in the most backward countries; in such places the local shopkeeper is in the habit of supplying his cus-

tomers with what they require, debiting them with the amount of the Price and, subsequently, crediting them with the Value of the products which they sell to him.

Even the elaborate system of Credit which we find in London is not a purely modern invention as the following extract from Lord Clarendon's History of the Rebellion against Charles I will show:—

"The Prince of Orange said that he believed that they who knew London so well would wonder very much that he should have been endeavouring above ten days to borrow twenty thousand pounds and that the richest men in Amsterdam had promised to supply him with it and that one half of it was not yet provided. . . . He could have double the sum in less time if he would receive it in paper which was the course of that country; and when, bargains being made for one hundred thousand pounds to be paid within ten days, it was never known that twenty thousand pounds were brought together at one time, but by bills . . . and he did really believe that *Amsterdam could pay a million* upon any good occasion, yet they would be troubled to bring twenty thousand pounds together in any one room."

For the purpose I have in view it is essential that the real nature of Credit should be clearly understood, and I shall now proceed to show how the modern system of Credit could have

grown up. What I shall say does not pretend to be a description of the way in which the system did actually grow up, and I deal with the matter as I propose to do simply because this course enables me to bring before the mind of the reader the essential features of our system of Credit..

If two persons have numerous transactions with each other in the way of buying and selling they will soon find that it will save trouble if, instead of one or the other paying over cash on the completion of each transaction, they decide to keep accounts of their transactions and at fixed intervals to pay or receive only the balance shown by the accounts. By so doing they (1) save themselves trouble and (2) effect an economy of Money and thereby secure a saving. For carrying on business in this way it is necessary that they should have confidence in each other so that their system of dealing becomes, to some extent, one of Credit.

If there were half-a-dozen men dealing with each other on this principle they would soon discover, if they all had confidence in one another, that instead of each man paying a balance to, or receiving a balance from, each of the other five, it would be convenient for them to meet periodically and settle their accounts jointly, each man paying or receiving as the case might be. In this way, each man

would have only one meeting to attend and only one payment to make or receive, and a further economy of time and Money would be effected.

If a seventh person wished to join, it might happen that five of the original group had no knowledge of his financial position or character and were unwilling to trust him. The sixth person might possess such knowledge and be willing to trust the newcomer, and even to give a guarantee on his account up to a certain amount provided that all transactions between the newcomer and the other five were promptly made known to him so that he should be kept informed of changes in the financial position of the person whom he had guaranteed. Similar guarantees might subsequently be given in favour of other persons who wished to join, and the Guarantor could fairly make a charge on account of the guarantees which he gave.

Under such conditions there would not merely be a saving of time and trouble, and an economy in the use of Money, but, in addition, the persons who were guaranteed would be enabled to purchase commodities although they had no Money in their possession, and in this way could obtain the use of capital without having to pay Money for it, or to transfer any article of value in exchange for it beforehand.

A further advance would be made if all the

persons concerned had such confidence in the original Guarantor as to leave their balances in his hands, and so save themselves the trouble of paying out or receiving cash, on condition that the Guarantor would undertake to repay on demand to each person any balance that might happen to be standing to his credit. When this stage had been reached the Guarantor would, for practical purposes, have attained to the position of a modern Bank, and the effect of this extension of the system of Credit would have been :—

1. To effect a saving of time and trouble in connection with the buying or selling of commodities, as well as in other transactions involving the paying or receiving of Money.

2. To effect a great economy of Gold.

3. To enable persons, who were trusted, to obtain commodities, or the use of capital, without requiring them to part at once with Money or other valuable property.

The latter consideration is of great importance. Under a system of Banking the public keep their balances at a Bank. The control of the capital which is represented by these balances is thereby concentrated and placed in the hands of one authority instead of being scattered among a number of persons who would find it difficult to combine for any common purpose. The Banker in virtue of the Gold which he owns, and the

balances deposited with him, is able to make advances to his customers and the advance of £10,000 to a customer is practically a guarantee by the Bank that the customer shall be able to pay all claims against him up to a limit of £10,000. The Bank's customers will ordinarily, and to a greater or less extent, leave their balances in the custody of the Bank. Consequently the Banker, in making loans and advances, is not limited to the amount of capital with which he commenced business *plus* the amount of his deposits. He is able to make loans and advances to any extent, subject only to the condition that he shall be able to meet all claims against him, and, specially, that he shall be able to give Gold to any customer who asks for it. As has been well said, Banking does not create Capital out of nothing, but the control of Capital is concentrated at the Bank, and the Banker by means of loans and advances, in one form or other, enables the persons in whom he has confidence to obtain the temporary use of Capital. The Banker is under the strongest inducement to see that Capital passes into the hands of those persons who are able to use it to the best advantage. The person who can use Capital to the greatest advantage will be anxious to obtain it and will be in a position to pay for the facilities afforded him, and if the Banker makes an advance to a person who

cannot use Capital profitably he runs the risk of loss.

Owing to the existence in different parts of the world of Banks which have a good knowledge of the character and standing of their respective customers, and are well informed as to the financial position of each other, the whole civilized world is linked together by a gigantic system of Credit, and apart from the very important economic effect thereby produced, by concentrating control over Capital and ensuring that the power of obtaining Capital shall be conferred on those who are able to use it to the best advantage, an enormous economy in the use of Gold is effected. The Banks, in addition to their other functions, serve as Clearing Houses for their customers, where claims are set off against each other and Money need not pass from hand to hand in each transaction.

In Gold Standard countries the Price of an article represents the exact amount of Gold for which it will exchange, and it is difficult to see how the system of Credit which exists could cause Prices to be higher than they otherwise would, except in so far as that system effects an economy of Gold, and in this way renders a larger quantity of it available for general purposes. The use of Credit does not directly affect the quantities of commodities that are for sale, and if these commodities are found to be the

equivalent of a larger amount of Gold it is reasonable to hold that the available supply of Gold must have increased.

The saving of time and trouble in making payments and the facilitating of the profitable employment of capital, which are the other chief results of our modern system of Banking, render it possible for commodities to be produced, and dealt with, at less cost, and could not possibly tend to raise their Prices, since Prices represent the ratios in which they exchange for Gold. On the other hand, economy in the use of Gold would naturally cause all Prices to rise by lowering the Value of Gold in relation to other articles.

But this simple explanation of the manner in which, and the extent to which, Banking, or the system of Credit which now prevails, affects Prices is not universally accepted.

The persons who reject the Quantity Theory of Money attach an influence to the effect of Credit on Prices which might fairly be described as magical. They say that Credit has the same influence on Prices as Money, quantity for quantity, and as the quantity of Credit is much greater than the quantity of Money, and fluctuates much more in amount, they, or some of them, hold that the influence of Money is practically negligible.

There is a sense in which it is true that Credit

has the same effect on Prices as Money, quantity for quantity, and there is a sense in which the statement is wholly incorrect. If I go into a horse-fair in Ireland with £10,000 to my credit in the local Bank and use it in purchasing horses I produce exactly the same effect on the Price of horses in that fair as if I had 10,000 sovereigns in my possession and purchased the horses by transferring the sovereigns to the sellers. In such case a Credit for £10,000 will have had the same effect on the local Price of horses as an equal amount of Money would have had. But to assert that the granting of a million pounds sterling of Credit to one or more persons and the use of that Credit in purchasing certain articles has the same effect *on the general level of Prices* as the addition of £1,000,000 in Gold to the Money of the world is a totally different proposition.

If gold of the value of £1,000,000 is obtained from the mines it quickly finds its way into a Bank.

No Banker will allow £1,000,000 sterling to lie idle, and he will issue Credit against it in order to make a profit.

The amount of Credit which may be issued against a reserve of £1,000,000 in Gold varies in the case of different Banks, but is greatly in excess of £1,000,000, and consequently £1,000,000 in gold has a greater effect on Prices

than £1,000,000 *of Credit because it gives rise* to an issue of several millions of Credit.

It must also be recollected that the granting of a credit of £1,000,000 to any particular person probably, and ordinarily, involves a restriction in the amount of Credit granted to other persons, if there has not been simultaneously an increase in the Bank's reserve, so that the grant of a Credit of £1,000,000 by no means indicates an increase of the total of Credit by that amount; it is more likely to indicate that though there is a greater demand for the articles that are to be dealt with by means of that Credit there is a corresponding reduction in the demand for certain other articles, so that the rise and fall in Prices balance each other with more or less accuracy, and leave the general level of Prices unaffected.

All Prices must bear the due economic relation to each other, and no possible increase in the amount of Credit given by the Banks can raise the average level of prices beyond the limit imposed on certain classes of Prices by the necessity of using Gold in connection with them either as coin to be passed from hand to hand or as Banking reserve. If some Prices are regulated by the amount of Money, all Prices in countries that use the Gold Standard must, under economic influences, conform thereto. This point I shall deal with at greater length hereafter.

The present system of Credit no doubt provides greater opportunities for a speculative rise in certain Prices than would exist if Money only were used in buying and selling. If Money only were used the person who wished to speculate would find it more difficult to obtain the means of doing so. He would have to borrow Money in the form of coin from a number of persons instead of obtaining Credit from a single Bank. But a temporary rise in the Prices of certain articles due to speculation is a totally different thing from a general rise in the average level of all Prices.

The theory of the equality of the influence of Gold and Credit on Prices, quantity for quantity, is carried to the extreme when it is said that there is £6,000,000,000 of Credit in the United Kingdom and only £100,000,000 of Gold, and that, consequently, the effect of doubling the quantity of Gold, would only be to raise Prices in the proportion of £6,100,000,000 to £6,200,000,000, as 61 to 62 or by 1·6 per cent. This reasoning assumes that Credit and Gold are used in exactly the same way in modern business and are in practice interchangeable, and that the result of increasing the Quantity of Money leaves the amount of Credit, measured in pounds sterling, unaltered. Nothing could well be further from the truth.

It is impossible to believe that the Banks

would, unless there was some great change in the conditions, hold reserves of twice the magnitude they now do and at the same time not increase the amount of their loans and advances, or, in other words, add to the amount of Credit, and unless the amount of Credit issued by the Banks is independent of the magnitude of the reserves, the argument above referred to falls to pieces.

It may also be pointed out that a reduction of Credit by £100,000,000 spread over the United Kingdom would not have a very great effect on the average level of Prices, but a reduction of much less than £100,000,000 of Gold would involve the whole commercial system in ruin for the time being. This shows that Gold and Credit cannot be treated as portions of the circulating medium which are interchangeable in all respects.

It has even been said that an increase in the quantity of goods that can be pledged as security to a Bank increases the amount of Credit proportionately, and that this increase of Credit causes a general rise of Prices.

A remarkable result if it could be accepted! for it amounts to holding that a great increase in the quantities of goods causes a smaller and not a larger quantity of goods to be the equivalent of the same quantity of Gold.

The man who possesses goods which he is prepared to pledge as security can, no doubt, get an advance or loan from a Bank, but

Banks cannot make loans to any amount without regard to their reserves of Gold, and it would seem more reasonable to hold that a great increase in the quantity of goods would lead to each man getting a less amount of Credit measured in pounds sterling in proportion to the quantity of goods pledged and dealt with in the market, and to a consequent fall in Prices, not to a rise. In other words, a great increase in Commodities, while the Quantity of Gold remained the same, might naturally be expected to lead to less Gold, and not more Gold, being exchangeable for the same quantity of Commodities.

Thirty years ago the world's annual production of Gold was about £20,000,000. In recent years about the same amount has been hoarded yearly in India on the average, while an equal amount has been used up in the arts. It would be interesting if some of the persons who hold that an increased production of Gold has practically no effect on Prices would explain how long Prices would continue to rise as they have been doing in recent years, while £40,000,000 yearly was being withdrawn from the Money of the world and only £20,000,000 added to it, and would satisfy our not unreasonable apprehension as to the ultimate results of such a state of things.

CHAPTER V

INDIRECT INFLUENCE OF GOLD ON PRICES

I SHALL now give an illustration which will bring before the mind of the reader the method by which an increase in the quantity of Money affects *all* Prices under our system of Credit. Let it be assumed that there are six countries which have commercial intercourse with each other and effectively maintain the Gold Standard, of which five use Credit to the greatest possible extent, while the sixth uses Gold only and not Credit in any form. We know that the relations which Prices bear to each other in all countries that have commercial intercourse and use the same Standard of Value are determined by economic considerations, and are independent of the particular Standard of Value which may be in use.

It necessarily follows that the scales of Prices in the five countries that use Credit must bear the due economic relation to the scale of Prices in the country that uses Gold only, and cannot

be raised above the limit thereby determined by any extension of Credit or of the system of Credit so long as the Gold Standard is maintained. If we assume that the general scale of Prices in any one of these five countries is raised by means of Credit to such an extent that it no longer bears the due economic relation to the scales of Price in the countries which use Gold only, imports into that country will increase and exports will fall off, the Exchange will fall, and ultimately Gold will be exported from it, if any is in circulation or in the Reserves of the Banks, and this export will continue until the scales of Prices in the different countries assume the due economic relation to each other; if there is no Gold to export, or if the available Gold becomes exhausted, the country which employs Credit will find its Currency depreciate with reference to Gold, and such depreciation would simply mean that its Standard of Value had ceased to be Gold.

From what has just been said the conclusion follows that if in any country or countries which maintain the Gold Standard the quantity of Gold in the form of Money influences certain prices, that influence is, under economic laws, automatically extended to all Prices in that country and in other Gold Standard countries, whether those countries make use of Credit or token coins of full legal tender. The relations which Prices

bear to each other in all countries having the same Standard of Value being fixed by economic forces, it necessarily follows that if prices are anywhere regulated by Gold they must be regulated by Gold in every place where the Standard of Value is Gold.

India uses the rupee, which is a token coin of full legal tender, and also makes use of Credit in many transactions, and practically does not use Gold. An increase in the production of Gold, and any consequent increase in the Quantity of Gold Money, cannot directly affect Indian Prices, but such increase can affect Prices in countries which use Gold, and Credit based on Gold, and under the operation of economic laws any consequent increase in Prices is automatically extended to India, so long as India continues to maintain the Gold Standard. The rise in Prices outside India, due to the increase in the Quantity of Money, destroys the equilibrium [1] in the exchange of commodities for commodities, and creates a balance of trade in India's favour which causes the exchange Value of the rupee to rise above the fixed rate of 1*s.* 4*d.*, and brings about, under the system now in force, an addition of rupees to the Indian Currency, which, in its turn, causes Indian Prices to rise.

[1] This equilibrium may also be destroyed by economic changes affecting the International Trade between the two countries, but at present I am only dealing with the effects of an increase in the Quantity of Money.

It cannot be doubted that the Quantity of Money does in many countries exercise an influence on at least certain classes of Prices. On any other hypothesis it is impossible to account for the fact that even the countries that use Credit to the greatest extent find it necessary to maintain reserves of Gold, and that the movements of Gold into and out of the reserves are most carefully watched by those who are responsible for the working of the Banks, and prompt steps taken to check any unusual and excessive drain upon them.

On the other hand, a Banker will not allow his reserves of Gold to remain permanently higher than he considers necessary for the purposes of his business. To do so would amount to neglecting to take a profit in his business which could safely be secured, and that is a course which the Banker does not adopt. When his reserves are in excess of his requirements the Banker lowers the rate of discount, issues Credit to a greater extent, and sees his reserves gradually reduced to the amount below which he considers it unsafe to allow them to fall. Leaving out of account temporary oscillation upwards or downwards, the Prices of the articles which are affected by the supply of Money are just as high as that supply can maintain under the conditions prevailing at the time, and all other Prices must conform

thereto so as to preserve the due economic relation.

We may look at the matter from another point of view. What becomes of an additional supply of Gold? It certainly does not get absorbed by persons engaged in financial business restricting the use of Credit, and substituting Gold for Credit, since the habit of using Credit instead of coin depends upon considerations of economy, convenience, safety, and custom, and the force of these considerations is not weakened by an increase in the supply of Gold. No Banker will issue less Credit because his reserve of Gold is greater. It cannot be absorbed in "establishing new business," as has been sometimes said, for it does not increase the amount of real Capital nor add to the number of workers, and if the man who extracts £1,000,000 from a mine employs it in some new business, he will require for that new business, when it is started, only a very small proportion of the Gold which he had in the first instance. There is practically no way in which an additional supply of Gold which is made available as Money can be utilised and absorbed except in raising Prices,[1] and if Prices are raised in one place by any

[1] As soon as Prices begin to rise, Gold would be cheaper, and this might lead to a larger quantity of Gold being hoarded and used in the Arts, but this influence would only come into effect when Gold had become cheaper, or, in other words, when Prices had risen to an appreciable extent.

increase in the supply of Money, that increase is automatically extended to all countries having the same Standard of Value, and the Prices of all commodities must have been raised in the same proportion when the adjustment is completed.

While the increase in the supply of Gold is in this way affecting all Prices, the Price of each particular commodity is being altered relatively to the Prices of other commodities by economic influences, so that we never find that all Prices have either risen or fallen to the same extent. An increase in the supply of Gold exerts an influence in the direction of raising all Prices, but in the case of certain articles economic causes may have, during any particular period of time, a much greater influence in the direction of causing a fall in Prices, and the net result as regards such articles would be a fall in Price and not a rise, though the average scale of Prices would have risen.

There is, however, an indirect and non-permanent effect of the rise in Prices due to an increased supply of Gold which is important and requires separate notice.

The rise in Prices due to an increased supply of Gold does not instantaneously affect all countries or even all Prices in that country in which the increased supply of Gold first affects Prices.

It will be obvious that as the rise of Prices caused by the increased supply of Gold is mainly due in the first instance to the issue of a larger amount of Credit by the Banks, the Prices that will feel the effect first are the Wholesale Prices of those important articles of human consumption that make the chief demands on the Banks, such as wheat, maize, cotton, wool, iron, and so forth. This rise in Wholesale Prices, caused by an increase in the supply of Gold, tends, under the operation of economic forces, to be diffused over all other Prices, and affects them more or less quickly according to the circumstances of each case. The rise in Wholesale Prices, while wages and other items of cost lag behind, causes an increase in the profits of producers, encourages enterprise, stimulates the demand for labour, and brings about higher rates for the use of Capital. The increased demand for labour reduces unemployment, and gradually causes Wages also to rise until they bear the due economic relation to Prices.

The persons who suffer are those who are entitled to receive money payments fixed by law, custom, or contract, the amounts of which either do not vary at all or vary very slowly in accordance with changing economic conditions.

It is hardly necessary to point out that a fall in Prices due to a monetary cause has the opposite effect. It lowers profits, and the fall in profits

brings down the rate of interest and discount, checks enterprise, leads to unemployment, and may even cause a lowering of Wages in time, while it benefits all persons who are entitled to payments fixed for ever or for a long period.

It is a difficult question to decide, even in theory, what would be the best Standard of Value, but we shall probably all agree that great and rapid changes in the average level of Prices due to fluctuations in the Quantity of Money ought to be avoided.

CHAPTER VI

VALUE OF MONEY DETERMINED BY SAME LAW AS VALUE OF OTHER ARTICLES

The Values of commodities, or the ratios in which they will exchange for each other, are expressed by their respective Prices, and, in addition, the price of each commodity, expresses the Value of Gold with reference to that commodity, and is, therefore, the ratio in which that commodity would exchange for Gold if the exchange were actually made.

The general law which regulates the Price of each commodity is stated in the following terms by Professor Cairnes :--

"It can, at all events, be shown that there is in every market a price at which it is desirable that the commodity, whatever it may be, shall sell at that time and place: desirable ultimately in the interests of consumers, but in a certain sense desirable in the interests of dealers, taking buyers and sellers together, and which the combined operations of both, so far as they are well informed respecting the conditions of supply and

demand, really tend to establish. To satisfy ourselves, it is only necessary to consider that, in all states of supply and demand, there is always a certain Price beyond which, if the markets rise, consumption is unnecessarily checked, and the stocks in the country pass off more slowly than is needful.

"In time the error is discovered and a competition sets in amongst holders of the commodity which results in a fall of price tending to stimulate consumption as much as it had previously been checked. On the other hand, supposing the market price to be set too low, stocks become exhausted too soon, and the undue fall will need to be compensated by a corresponding allowance at a later period. Such oscillations are at variance with the interest of the consumer, and the price, therefore, which renders them unnecessary, which is just sufficient, and no more than sufficient, to carry the working supply over, under such a surplus as circumstances may render advisable, to meet the new supplies forthcoming, may, I think, be conveniently designated as the 'proper price' of the market. It is this price which it seems to me the dealers in the market have dimly in view when by implication they refer to a standard by which they pronounce the actual price to be 'too high' or 'too low' or 'what it ought to be.' I would define it as the price which suffices to adjust in the most advantageous way the existing supply and the existing demand pending the coming forward of fresh supplies from the sources of production."

The principle laid down by Professor Cairnes is obviously sound though his statement of it is, for my present purpose, less simple than it would have been if his sole object had been to indicate the law by which the market Price is determined, without attempting to show at the same time that the Price so determined is the Price at which it is most advantageous to the whole community that the article should be sold, and without taking into consideration the possibility of a portion of the stock being held over in view of a possible failure of future supplies. Putting aside the two latter considerations, it may be said that the Price, and consequently the Value in relation to other commodities, of any commodity placed on the market tends to be so fixed that the demand at that Price shall just be sufficient to take off the whole stock, there being neither any portion of the stock wasted by being left unsold nor any portion of the demand for the article at that Price remaining unsatisfied.

In exactly the same way the general level of Prices, which constitutes the Value of Gold, rises or falls in such manner as just to absorb and fully utilise the whole quantity of that metal available as Money, there being neither any Gold left unused, nor any such rise in Prices as to make it impossible to carry on business owing to the difficulty, or apprehended difficulty, of

obtaining Money for the transactions in which Gold is, or may be, required.

The same result is produced in the case of Gold and every other commodity by the operation of a very simple law, universally applicable: namely, the desire on the part of the holder of any article for the sake of profit to secure the maximum of profit therefrom. The holder of marketable commodities wishes to sell them at the maximum Price he can obtain, subject to the condition that an unnecessary amount of stock is not left on his hands. The Banker in like manner wishes to make what profit he can, and the limit of his operations, so long as he has confidence in the persons with whom he deals, is his fear that his stock of Gold may fall below what he considers safe.

If a person engaged in business finds that he has more Gold than he requires he must be assumed to deal with it in a reasonable manner. He will either employ it in his business by purchasing something with it, or he will lodge it with his Banker.

In the former case it is put into circulation at once and will quickly find its way into a Bank: in the latter case the Banker must also be assumed to act on business principles and not to hold a larger reserve than he really needs. In one way or other the Banker extends his operations until

the amount of Gold which he considers to be in excess of his requirements is absorbed.

Owing to the ebb and flow of business there may be at times a superfluity of Gold at the Banks, or the reserves may fall below what the Bankers consider safe, but the guiding law is that the supply of Gold shall just be fully utilised.

The general law may be stated in the following terms :—

The Value of every commodity which is in the market is varied from time to time with reference to every other commodity so as to approximate to a proper or market Value, which market Value is such that the total quantity of that commodity shall be taken off the market at that Value; that there shall be no portion unused or superfluous and that no portion of the demand at that Value shall remain unsatisfied.

This law is as applicable in the case of Money as in the case of ordinary commodities and the same result is produced in the same way in both cases, namely by a series of approximations. In the case of Money, as in the case of ordinary commodities, the demand at one moment threatens to exceed the supply; at another the supply is in excess of the demand. In the long run the supply just equals the demand.

The average or general level of Prices cannot

permanently exceed the level which the supply of Money is just sufficient to maintain under the market conditions prevailing at the time; nor can it permanently fall below the same level.

While the average or general level of Prices is regulated by the principle just stated, the Prices of particular articles may vary to any extent and in any direction, subject to the single condition that the total demand for Money shall be just equal to the supply. This liability to change in the Price of every commodity, due to economic causes, and subject only to a limit based on the demand for Money arising out of the effect of the total changes of Prices in the case of all commodities, is one of the causes which make it so difficult to devise a satisfactory means of measuring changes in the average level of Prices, due to an increase or decrease in the Quantity of Money.

I am not aware of any means whereby, even in theory, the changes in the Prices of all commodities in every place can be combined so as to produce a perfect measure of the Purchasing Power of Gold.

The measure of the Purchasing Power of Gold which will be found of greatest practical value is the average of the Wholesale Prices of the more important articles of human consumption, and this average is the measure of

greatest practical value simply because it indicates the change in the Purchasing Power of Gold with reference to those commodities alterations in the Price of which have the greatest effect on the welfare of the mass of the population.

CHAPTER VII

LIMITATIONS TO THE QUANTITY THEORY OF MONEY

The Quantity Theory may be put in this form:—"Other things being equal the level of Prices is proportionate to the Quantity of Money." This proposition has been challenged in recent years, but I have never seen any argument against its truth which seemed to me worth considering, and the controversy should be closed.

It will be instructive to notice the causes which led to attacks in recent years on the Quantity Theory of Money.

Professor Irving Fisher explains how that Theory came to be attacked in America:—

"It has seemed to me a scandal that academic economists have, through outside clamour, been led into disagreements over the fundamental proposition concerning Money. This is due to the confusion in which the subject has been

thrown by reason of the political controversies into which it has become entangled.

"As someone has said, it would seem that the theorems of Euclid would be challenged and doubted if they should be appealed to by one political party as against another. At any rate, since the 'Quantity Theory' has become the subject of political dispute, it has lost prestige, and has even come to be regarded by many as an exploded fallacy. The attempts by promoters of unsound money to make an unsound use of the Quantity Theory—as in the first Bryan Campaign—led many sound money men to the utter repudiation of the 'Quantity Theory.'"

In England the Bimetallic controversy resulted in a similar attack on the "Quantity Theory."[1]

The Bimetallists pointed to the general fall in

[1] In *The Times* of 7th May, 1883, there appeared a letter from the late Lord Goschen in which the following passage occurs :—

"Some writers have appeared to show something approaching to irritation at the view that the situation of gold should have largely influenced prices. I scarcely know why unless through the apprehension that the Bimetallist may utilize the argument."

Sir Robert Giffen admitted the "Appreciation" of Gold ; but was strongly opposed to Bimetallism.

Other Monometallists defended the Single Gold Standard on the ground that the Quantity of Gold had practically no effect on prices.

This amounted to saying that the Quantity of Gold in the markets of the world had no influence on the Value of Gold as compared with commodities. I urged that if this was the case as regards Gold it ought to be equally true with regard to Silver, but my argument was not favourably received.

A Deus ex Machina in the form of Credit always appeared at the critical moment and withdrew Gold beyond the limits of human observation !

Gold Prices and urged that it was due to the demonetization of silver which had increased the demand for Gold relatively to the supply. This contention was met, among other arguments, by the reply that the Quantity Theory was not applicable to modern conditions, that if it contained any truth at all it was subject to so many limitations and qualifications as to be useless for all practical purposes, that the influence of Gold on Prices was quite insignificant and might be neglected, and that Prices really depended upon Credit which was explained to have a degree of influence that appeared to me to be positively magical.

It is not my intention to repeat the arguments in support of the Quantity Theory, but as I am endeavouring to explain in what degree, as well as in what way, an increase in the supply of Gold affects Prices, I must devote some space to explaining the limitations involved in the use of the term "other things being equal."

It has been said that the "other things" are so numerous, so powerful, and so subtle in their mode of operation that the Quantity Theory as above stated is of no practical value. Remarks of this nature might be made regarding many scientific truths which are of great value, and even of Newton's First Law of Motion,[1] that a

[1] Corpus omne perseverare in statu suo quiescendi vel movendi uniformiter in directione nisi quatenus illud a viribus impressis cogitur statum suum mutare.

material body if at rest would remain at rest, and if moving would continue to move in a straight line with uniform velocity unless acted on by some force. No human being has ever seen a body moving in a line which could be called absolutely straight. At most, the body would be moving in a line which was straight with reference to points assumed to be fixed, but which were really moving. Nor has anyone ever seen a body which was really at rest in space. We are in the habit of saying that a body is at rest when it preserves the same relative position to other bodies, but in reality every body of which we have any experience is always in motion. Every body on the surface of the earth has a motion due to the revolution of the earth on its axis; has another motion due to the revolution of the earth round the sun, partakes of the drift in space of the whole solar system, and for anything we know to the contrary, may be affected as to its position in space by innumerable other causes.

Nor, so far as our experience goes, has any body ever moved, or even existed, which was not being acted upon by forces from outside.

It might then be said that it was useless to lay down a Law of Motion which only applied to the case of a body at rest since no body ever is at rest, or moving in a manner in which no body has ever been known to move, or

existing under conditions which never could be realised in practice. Nevertheless we know that Newton's First Law of Motion is of the greatest practical value, and I shall show hereafter that conclusions of some practical value can be drawn from the Quantity Theory of Money.

For the present, however, I limit myself to indicating the "other things" which are assumed by the Quantity Theory to be equal, but which in practice never are equal.

The amount of work which Money has to do, in so far as it is employed directly in effecting exchanges, is influenced by the number and quantities of commodities to be exchanged, by the amounts in which the exchanges take place, by the number of the exchanges, and by variation in the times at which, and the localities in which, the exchanges are effected. All these causes affect the amount of Money necessary to carry out the exchanges. As the population of the world is increasing, and also the wealth per head of population, and as the number of exchanges is growing in a still higher degree, owing to the subdivision of labour and the linking together in commerce of countries which are very far apart, the changes I have enumerated tend, for the most part, to increase the work Money has to do, and to lower Prices. It seems to me impossible

to estimate the exact amount of influence which each of these causes exercises on the average level of Prices; at any rate it is beyond my power to do so.

The exchanges of commodities are effected either by passing Money from hand to hand or, under our system of Credit, by giving promises to pay Money, which are generally set off against each other so that Money need not in such cases be transferred from one person to another, or by passing from hand to hand something which is conventionally, and often legally, held to be of the same Value as Money and which in practice is of the same Value; of this nature are all Token Coins. The giving of promises to pay which are set off against each other constitutes the modern system of Credit and has reduced the demand for Money to an extent which could hardly be exaggerated, and has consequently lowered its Value or raised Prices to an equal extent.

It will be obvious that if Money passes from hand to hand, the amount of work it can do will depend very greatly on the rapidity with which it changes hands. A sovereign may effect one exchange in a day or it may effect fifty. Under modern conditions, the tendency is for Money to change hands more rapidly than before, the resulting influence enabling exchanges to be effected with a less Quantity

of Money and thus acting in the direction of raising Prices.

The system of effecting exchanges by giving promises to pay, and setting off these promises against each other, effects a very great economy of Gold and may be modified in various ways. It may be extended so as to cover exchanges which were formerly effected by passing Money from hand to hand, and it may be said with confidence that extensions of this nature are always taking place; that they lead to a great economy of Gold and so tend to raise Prices. The system of Credit may, of course, be contracted and exchanges effected by passing Money from hand to hand, which were formerly dealt with by Credit, but such changes only take place to a very limited extent and as a temporary measure. The general tendency is in the opposite direction.

And just as there may be a more rapid circulation of Money from hand to hand, so there may be a more rapid circulation of promises to pay or orders to pay. Two men who have each a credit of £10,000 at their respective Banks may issue cheques to any extent in favour of each other provided that each is careful to see that the amount of money standing to his credit is never exhausted. In this way a great number of exchanges may be effected without the issue of a greater amount of Credit by the Banks.

Although every Bank which keeps a reserve of Gold regulates the amount of Credit it issues by reference to its stock of Gold, the proportion between Gold and Credit is not invariable. Under varying conditions a greater or less amount of Credit will be issued against the same amount of Gold. But each Bank has its own rule on the subject and the proportion between liabilities and Gold which any specified Bank considers safe does not vary greatly within any definite period of time which may be chosen. The general tendency, no doubt, is towards issuing a larger amount of Credit on Reserves of the same magnitude.

Some exchanges are effected without any use of Gold or of Credit based on Gold. Such exchanges are those which are effected by passing token coins (silver, copper, or bronze) from hand to hand. A rise in the Prices of commodities causes no additional demand for Gold in so far as commodities are bought and sold for token coins and a fall in such Prices sets free no Gold for other purposes.

In India, for example, the production of commodities, as well as general trade and commerce, might increase to any extent, and internal prices and wages might rise enormously, without any increase in the demand for Gold as Money so long as the currency in use was confined to the silver rupee. Such changes would lead to an

increased demand for silver from which to manufacture new rupees, but would not directly increase the demand for Gold. Indirectly there might be a greater demand for Gold. With higher prices, which means cheaper Gold, the Indians might hoard a larger quantity, and some additional gold might be required to maintain the value of the silver rupee.

An extension of the use of Paper Notes generally effects an economy of Gold and in this way tends to lower its Value in relation to commodities, or, in other words, to raise Prices.

If £20,000,000 in notes are issued on a reserve of £10,000,000 in Gold, and if the notes are freely accepted in place of Gold, the result is exactly the same as if the world's supply of Gold had been increased by £10,000,000.

I have now enumerated the other things which are assumed to be equal in the statement of the Quantity Theory and which affect the average level of Prices, and, putting aside for the time being the question of the Quantity of Money, it will be seen that they fall into two classes.

(1) Influences affecting the amount of work Money has to do, and

(2) Influences affecting its efficiency in the performance of that work.

The efficiency of Money for the effecting of exchanges is enormously increased when it is used as a basis for Credit.

If we denote the work Money has to perform by W, its efficiency by E, and if Q and P represent, respectively, the Quantity of Money and the average level of Prices, we may state the relation between them in the following form :—

$$P = Q \times \frac{E}{W}.$$

I should be very unwilling to attempt to assign a definite numerical value to E and W, or even P, at any particular time, but the form of the equation enables us to draw conclusions which are independent of the varying Values of E, W, and P.

We can see that if $\frac{E}{W}$ falls to half its former value, P (the average level of Prices) will remain the same if, simultaneously, Q is doubled. Or, if $\frac{E}{W}$ increases two-fold, P will remain the same if Q is halved. If $\frac{E}{W}$ increases ten-fold and Q two-fold the resulting increase of P will be twenty-fold. The effect of considerable changes in the Quantity of Money is, in fact, never negligible. Other causes may, or may not, produce greater changes in the average level of Prices than is brought about during the same period by fluctuations in the Quantity of Money, but however great these changes may be, they can always be counteracted by a sufficient change

in the Quantity of Money. The Value of $\frac{E}{W}$ changes gradually and not *per saltum*.

The conclusion at which we have just arrived explains how it happens that the issue of indefinite quantities of inconvertible Paper Money has always indefinitely increased Prices, whatever precautions and safeguards might be adopted. To those who hold that under modern conditions Prices depend on Credit and that effect of the Quantity of Money is negligible, I would suggest that they should consider the effect on Prices of issuing (say) £300,000,000 of inconvertible Paper Money of full legal tender in the British Isles. The additional Quantity of Money required to make a certain amount of change in Prices in any particular country depends on the Quantity of Money already in use in that country, and is in no way affected by the extent to which Credit is in use. The amount of Credit, stated in terms of Money, increases automatically as the Quantity of Money increases.

No measures affecting the Currency which have been adopted in violation of the Quantity Theory of Money have ever proved successful, and no measures which depended for their success on the soundness of that Theory have ever failed if given a fair trial. The maintenance of the Gold Standard in India and the other countries that have established a Gold Exchange

Standard would become impossible if the level of Prices could not be affected by varying the amount of the coins in circulation. The maintenance at par of Bank Notes, as well as of the silver rupee, by means of a Gold Reserve is based on the same principle. When the Value of the Rupee tends to fall below 1*s.* 4*d.* the Gold Reserve affords the means of withdrawing rupees from circulation, and the reduction in number raises their Value and lowers rupee Prices, the raising in Value and the lowering of Prices being one and the same phenomenon. Bank Notes are maintained at par in the same way. If necessity arises, they are exchanged for Gold, and the reduction in their Quantity causes their Value to be maintained.

Token coins, whether of copper, bronze, nickel, or silver, are maintained at their Rupee level in relation to gold by limiting their Quantity. Not more of such coins can be safely issued than are just sufficient to meet the wants of the public at the level of prices existing for the time being. Great evils have been caused in China in the present day by the local authorities issuing token coins, called "cash," in excess of the amount necessary to carry on business. In such cases the cash has always depreciated in reference to silver, which is the Standard of Value in that country. This depreciation is, of course, accompanied by a rise of Prices when such Prices are

stated in terms of the token coins. Similar difficulties were experienced in this country in former times, and notably in the reigns of James I. and Charles I. Important as are the limitations to the Quantity Theory of Money involved in the assumption that other things are equal, the man who has to deal with Monetary questions can no more disregard the Quantity Theory in any practical measures he may advocate than the astronomer can neglect the law of gravitation in studying the movements of the heavenly bodies.

CHAPTER VIII

SUMMARY OF CONCLUSIONS

The following are the principal conclusions at which we have already arrived :—

1. The ratios which Prices bear to each other are determined by economic considerations and are independent of the Standard of Value which may happen to be in use.

2. Money is distributed, by a natural process, throughout all countries having the same Standard of Value in proportion to the requirements in each place.

(If a country uses Gold as the Standard of Value, but not as Currency, special arrangements are required to keep its Currency at the same relative value to Gold. If these arrangements break down the country ceases—for the time being—to have a Gold Standard).

3. As the ratios which the Prices of different commodities bear to each other are determined by economic influences, a change in economic

conditions may tend to bring about a rise in Prices in one country as compared with those in others. In each case Money flows to the country where Prices tend to rise and the final change takes the form of a rise in Prices in one country and a fall in the others.

If two countries do not use the same Standard of Value this flow of Money from one country to the other is impossible and the change in economic conditions produces an alteration in the relative Value of the two Standards.

4. Changes in Prices and alterations in the Rate of Exchange constitute the means whereby the trade of the world is carried on in accordance with economic influences.

5. Other things being equal, the general level of Prices is proportional to the Quantity of Money.

If, in any country, token coins of limited legal tender are used, the quantity of such coins must be limited to the amount which can be employed at the level of Prices prevailing for the time being. Any considerable excess, which is not of a temporary nature, causes the token coins to fall below their nominal Gold Value, and Prices measured in token coins rise in proportion to the fall in Gold Value.

6. The relation between Prices and the Quantity of Money may be expressed by the equation,

$$P = Q \times \frac{E}{W}$$

P represents average level of Prices; Q is the Quantity of Money, E represents the Efficiency of Money as the Medium of Exchange and is affected both by extensions of Credit and by altered rapidity of circulation. W is the total work to be performed.

7. Prices are the expression of the Value of Gold in comparison with commodities, and the law which regulates the Value of each commodity with reference to other commodities is the same as that which regulates the Value of Gold in relation to commodities. The Value of Gold in relation to commodities (in other words, Prices) is fixed at that rate which will just cause the whole available supply of Gold to be utilised, there being neither any surplus nor any deficiency.

8. Under the modern system of Credit, business is very largely carried on by giving what are in effect Promises to Pay, and these Promises are set off against each other; in this way a great economy of Gold is secured.

9. The modern system of Credit, as carried out with the assistance of Banks, exercises an important economic influence, but the economy in the use of Money which it effects is the measure of its influence on the average level of Prices.

10. The Prices of articles which are bought and

sold for Credit and in regard to which no money passes from hand to hand, must preserve the due economic relation to Prices which are limited by the supply of Money, and the influence of Money, direct and indirect, on those portions of the world of trade and commerce where Money is used is automatically extended to all Prices in countries that make use of the Gold Standard, including the Prices of the articles bought and sold with token coins.

11. New supplies of Gold exercise their chief and primary influence on Prices by the temporary lowering of the rate of discount and of the charge for advances and loans which they produce when they first find their way into the Banks.

The Wholesale Prices of the main articles of production and consumption, and especially those of them that are dealt with in the international markets, are the first to feel the effects of any increase or decrease in the Quantity of Money. The influence of economic forces tends to cause all others Prices to rise or fall in proportion.

12. As the rise in Wholesale Prices due to an increase in the Quantity of Money does not extend immediately to allP rices, or to Wages and other money payments fixed by contract or custom, the producers' scale of profit rises, enterprise is stimulated, borrowers desire more credit and are prepared to pay higher rates for it.

The secondary effect of an increase in the Quantity of Money is, therefore, a rise in the general rate of profit, and a rise in the rates of interest and discount.

13. Owing to the fact that an increase or decrease in the Quantity of Money does not affect all Prices and Wages simultaneously and affects slowly, if at all, Prices fixed by custom, by law, or by contract, such changes affect different persons and different classes of the community in different ways and are either prejudicial or beneficial to them as the case may be.

14. A number of agencies and influences, indefinitely numerous, are unceasingly at work to adjust the scale of Prices to the supply of Money, and there seems to be no more difficulty experienced in doing so when the Quantity of Money is falling off than when it is increasing. On the contrary, the stimulus to enterprise and speculation which follows a general rise in Prices, appears more likely to give rise to financial crises and panics when the supply of new Gold is in excess than when it is in defect.

CHAPTER IX

PRACTICAL VALUE OF THE QUANTITY THEORY

Having laid down the general laws which regulate the influence of Gold on Prices we may now consider what conclusions can be drawn from them.

Let us take in the first place the general expression for the Quantity Theory:

$$P = Q \times \frac{E}{W}$$

From this equation we see that, however great the change may be in $\frac{E}{W}$, we can always maintain any average level of Prices we may prefer by suitable alteration of Q, the Quantity of Money.

It might of course so happen, theoretically, that the changes in $\frac{E}{W}$ were so great and rapid that it would be very difficult to counteract them by modification of Q. In practice, how-

ever, $\frac{E}{W}$ does not vary so much within a limited period of time as as to make it difficult to maintain P at, approximately, the same figure by acting on Q. So long as we can control Q we are, practically as well as theoretically, in command of the situation. It is this power of controlling Q which enables the Indian Gold Standard to be maintained as well as the Gold Standard in other countries which do not make use of a Gold Currency.

It also makes it possible for the world to substitute for a metallic Standard of Value a system under which the monetary unit would represent a definite amount of Purchasing Power. To do so it would only be necessary to alter Q from time to time so as to preserve the same value of P. Whether it will ever be desirable to effect this change, and whether the world will ever be sufficiently advanced in civilization to be able to carry it out, are questions which can be left to the future for decision.

It does not appear to me that there is the slightest room for doubt regarding the soundness of the Quantity Theory of Money as I have stated it. In practical measures dealing with the Currency and the Standard of Value it is as impossible to neglect it as it would be to assign no influence to the law of gravitation in dealing with the bodies that constitute the Solar System.

But when we pass beyond the general Theory of the influence of the Quantity of Money on Prices to consider to what extent the supply of new Gold has actually affected Prices within any definite period, and what has been the economic effect of such changes of Prices, we enter on more debatable ground.

The "other things" which we assumed to be equal in the statement of the Quantity Theory never are equal. The population, the wealth, and the trade of the world are always increasing. The commerce of the world tends to be carried on more and more by Credit, and the organization of Credit in places where it previously existed is continually being perfected. The rapidity of circulation tends also to increase from a variety of causes. On the other hand, the increase in the population and wealth of the world tends to a constantly increasing amount of Gold being used otherwise than as Money.

The Prices of particular commodities and of services are continually rising and falling owing to economic causes, and I know of no means by which an exact measure of the rise or fall in the general Purchasing Power of Money can be devised. For practical purposes we must be content to ascertain as accurately as we can the change in the Purchasing Power of Money with reference to those articles changes in the Price of which have the greatest effect on the welfare of

human beings, and in this view of the subject there is no better test of the rise and fall of the Purchasing Power of Money than the average Price of the chief articles of human consumption. As we cannot measure with accuracy the increase or decrease in the general Purchasing Power of Money, and as we have hitherto been unable to ascertain to what extent other causes than an increase or decrease in the Quantity of Money have operated in producing that increase or decrease, it will be obvious that we cannot determine the precise amount of influence which changes in the Quantity of Money may have had on prices within any definite period of time. But of one thing we can be certain, namely, that whatever other causes may have been in operation the influence of changes in the Quantity of Money has been proportional to the magnitude of those changes.

The best Standard of Value is the Standard which gives results which best promote the welfare of human beings. It may be that the best results would not be given in every instance by the Standard of Value of which the Purchasing Power remained the same with reference to the chief articles of human consumption, but it is obviously desirable that there should not be great and rapid fluctuations in the general Purchasing Power of Money, and for practical purposes the best Standard would be that under

which the Purchasing Power of Money with reference to the chief commodities remained nearly the same. At any rate it seems impossible to devise a better standard.

From the equation

$$P = Q \times \frac{E}{W}$$

we see that it is of importance that Q should not be subject to great and sudden fluctuations. If such fluctuations occur there must be corresponding changes in the general level of Prices unless, what is highly improbable, simultaneous fluctuations in $\frac{E}{W}$ balance the changes in Q.

So long as Gold and Silver, used jointly, constituted the Money of the world Q was larger than it is at present, and the use of great quantities of Silver by certain Eastern Countries, both as Currency and for the purpose of hoarding, acted on the World's Standard of Value as ballast acts on a ship. This safeguard has now been lost, and I foresee the possibility of great difficulties in the future if Q is indefinitely reduced and the business of the world carried on in an increasing degree by means of Credit.

In such case sudden and large increases or decreases in the production of Gold would have a great influence on Prices. It would be a merit in our present Standard of Value if the yearly production of Gold increased as Prices fell (which

would mean that Gold was increasing in Value) and fell off as Prices rose, but it is quite impossible to say at the present time what fluctuations in the yearly production of Gold will be experienced in the future.

CHAPTER X

CONSEQUENCES OF A GENERAL FALL OR RISE IN PRICES

THAT great fluctuations in the average level of Prices are an evil admits of no doubt and I believe that such fluctuations do, in practice, exercise an important influence on human progress and welfare.

Let us suppose that there are classes of persons who are under an obligation to pay £100,000,000 yearly, and that they obtain the Money required to meet their obligations by the sale of articles which they produce. If a certain quantity of the commodities which they produce sell at one time for £100,000,000 and the Price of these commodities falls by one-third the sale of the same quantity will only produce £66,666,666$\frac{2}{3}$, and the quantity of commodities that must be sold in order to produce £100,000,000 will require to be increased by no less than fifty per cent. In other words, although the amount of the debt measured in pounds sterling remains the same as

before, the real burden which the debtors have to carry has increased by fifty per cent. They are, in fact, in the same position as if Prices had remained the same and the amount of their yearly payments had been raised by a stroke of the pen from £100,000,000 to £150,000,000. On the other hand, if Prices rise by one-third the sale of the quantity of goods that formerly produced £100,000,000 would, under the new conditions, produce £133,333,333⅓ and the debtors would only have to sell three-fourths as much in order to produce £100,000,000; their burden will have been reduced by one-fourth. The difference to the debtor between a rise and a fall in Prices is enormous. If Prices fall one-third he has to part with fifty per cent. more commodities in order to meet his liability; if Prices rise by one-third he can meet his obligations by selling one-fourth less. A simple calculation will show that the real burden of the debtor is exactly twice as great in the one case as in the other. Bearing in mind the enormous number of transactions in the present day which involve the periodical payment of money, or the payment of money at a future time, it will be obvious that a general rise or fall in Prices must exert a very great influence, for better or for worse, on the position of many classes of the community. The national debts of the world amount to some 6,000 or 7,000 millions

sterling. There are in addition the amounts borrowed by Municipalities and Local Authorities, the money lent on Mortgages, and that due on Bonds and so forth.

There are also the other fixed money payments which are not affected by changes in the Prices of commodities, so that it is difficult to exaggerate the profound and yet obscure influence that is exercised by changes in the general level of the Prices of commodities.

Prices are always rising or falling owing to economic causes, and the man of business looks only to such causes, and, for his purpose, need not look beyond them, but theoretical reasoning leads to the conclusion that a general Rise or a general Fall in Prices must be followed, or accompanied, by consequences of a very important nature, and it seems to me that history confirms this conclusion.

In the preceding paragraph I have dealt with the effect of a general Rise or Fall of Prices on the creditor and debtor classes, but the rise or fall of Prices is not simultaneous and immediate, and effects of importance from an economic point of view may be produced by the fact that the fall or rise in Prices only affects some transactions in the first instance, and that its extension to others is gradual.

An additional supply of Money produces its chief effect on Prices in the first instance by increasing

the supply of, and lowering the cost of, Credit. The Rise in Prices that is thus caused affects the Wholesale Prices of those articles which are bought and sold for Credit, and as all Prices and Wages do not rise simultaneously, and at any rate do not rise immediately to the full extent, the producers of such articles find their profits increasing, though such increase is obtained in the first instance at the expense of the other members of the community. The increase in the rate of profit stimulates enterprise, leads to a greater demand for Credit, raises the rate of discount and interest, and makes persons in business willing to pay a higher rate for Credit. If the supply of Gold continues abundant, prices, generally, continue to rise, and production is increased; times are said to be prosperous and really are prosperous in the sense that a greater quantity of wealth is being produced every year though certain classes of the community suffer. The persons who suffer most are those whose incomes are fixed either permanently or for a long period, or do not respond, or do not respond fully and immediately, to the rise in Prices. The position of the wage-earner requires special notice. The stimulus to enterprise and the higher rates of profit lead to an increased demand for labour, reduce unemployment, and tend to raise Wages. In the first instance there is some loss owing to Wages not keeping pace with the

rise in Prices, but against that may be set, for what it is worth, the compensation arising from fuller and more continuous employment. In the long run the sufferers are those whose incomes do not respond, or do not respond completely, to the rise in Prices. The loss which they incur represents so much additional gain accruing to other members of the community.

A general Fall in Prices due to a monetary cause would have the opposite effect. It would be attended with a low rate of profit, interest, and discount. Enterprise would be checked, unemployment would follow, and the lack of employment would be a drawback to the gain the wage-earners would derive from Prices falling more quickly than Wages.

Economic considerations, of course, regulate in the long run the relation between Wages and the Prices of commodities, and it is quite possible for Wages to remain at the same level, or even rise, while the Prices of commodities are falling.

While the influence of Money on Prices seems to me to be beyond question, and while the theoretical results of a general Rise or Fall in Prices are what I have just explained, the question of the practical effects that have been experienced in the past from a great increase or decrease in the supply of Money must be separately considered.

The amount of Money in use in the present day is small in proportion to the wealth of the world and the total quantity of commodities that change hands every year by purchase and sale. Money is the basis of the system by which the business of the world is carried on, but the superstructure of Credit is large, and though there is a relation between the Quantity of Money and Credit it is not a fixed relation for all time and for all places. Each country has its own system of Credit, which differs more or less from that of other countries; the organization of Credit in every country is always growing and being improved; and even while the system of Credit remains the same there is some amount of elasticity in the relations between Money and Credit.

It may then be reasonably asked whether, in practice, important increases in the relative Quantity of Money produce the changes we have just indicated in the direction of raising Prices, increasing profits, stimulating enterprise, and affecting injuriously or beneficially the economic welfare of various classes of the community.

There can be no question that the large increase in the Quantity of Gold and Silver made available in the Western world by the discovery of America caused Prices to rise very largely. I need not do more than quote what Adam Smith has said on this subject :—

"The discovery of the abundant mines of America reduced, in the sixteenth century, the value of gold and silver to about a third of what it had been before."

And again:—

"The discovery of the abundant mines of America seems to have been the sole cause of this diminution in the value of silver in proportion to that of corn. It is accounted for, accordingly, in the same manner by everybody; and there never has been any dispute either about the fact or about the cause of it."

I desire to call the special attention of the reader to the fact that in those days the general rise of Prices took place slowly and after the lapse of a considerable time. The Gold and Silver which came from South America was for the most part employed by the Spanish Government for the promotion of a political and military policy in Europe. It found its way more slowly into the channels of trade than it would do in the present day, and the stream of commerce did not flow with such rapidity nor touch the shores of so many countries as it now does. Adam Smith says with regard to this phenomenon that "the discovery of the mines of America does not seem to have had any very sensible *effect upon the price of things in* England till after 1570; though even the mines of Potosi

had been discovered more than twenty years before."

After the great discoveries of gold in California and Australia the same tendency to a rise in Prices was observed. Jevons wrote as follows in 1863:—

"Overlooking fluctuations due to variations of supply, and the greater fluctuations due to variations of demand, it may be confidently stated that prices pursued a downward course from 1820, about the time when the Currency was re-established on a gold basis, to 1850.

"The fall, it is true, was most rapid at first. Silver, too, does not share in the fall. We can only explain these facts, so far as I am aware, by supposing that the supply of the precious metals did not keep pace with the demand, or that while modes of procuring, raising and making other articles more easily and cheaply were constantly being discovered, no such great improvements took place in the case of the precious metals. It should be remembered, too, that the supplies of Russian Gold were failing and the Spanish-American colonies were falling into anarchy.

"Thus while industry, trade, and property were rapidly advancing in Great Britain, America and most other parts of the world, there was no corresponding advance in the production of the precious metals. Prices, both in Gold and Silver continually receded. Now if, while the introduction of free trade, railways,

telegraphs and innumerable other improvements accelerated the extension of trade, no new discoveries of gold and silver had been made, what must have occurred? *Prices must have continued in the downward course they had pursued for thirty or forty years before. But they did not continue in this course—on the contrary they turned upwards in a sudden and decided manner* as shown in the body of this tract. And this change was simultaneous with the discovery of the new gold-fields. Half the Prerogative Instances of Bacon are exemplified in this question, and if the philosophy of observation and common sense may be applied to statistical matters, we can draw but one conclusion—that prices have risen in consequence of the gold discoveries."

The reader will notice that the tendency to a rise in Prices showed itself more quickly after the great Gold discoveries in California and Australia than had been the case after the discovery of great quantities of both Gold and Silver in South America.

When Germany substituted Gold for Silver as the Standard of Value (1871-73), other nations followed her example, and a greatly increased demand for Gold arose owing to other causes. The special demands for Gold at this time came to at least £200,000,000, being about ten times the average yearly production of Gold. The production of Gold had also fallen

off. The late Lord Goschen used the following language on this subject in 1888:—

"Economists will accordingly ask themselves what result, if any, is such a phenomenon likely to have produced? I think there is scarcely an economist but would answer at once: 'It is probable, it is almost necessary, it is according to the laws and principles of currency, that such a phenomenon must be followed by a fall in the prices of commodities generally. Just as a large amount of gold poured into Europe in 1852 and subsequent years created a rise in prices, so the counter-phenomenon must produce a fall.'"

After this increased demand for Gold took effect there was experienced a marked fall in Prices. *Low rates of profit, interest, and discount* prevailed; there was a good deal of unemployment, but not a general and serious fall in Wages. So great was the depression in trade and industry that in 1885 a Royal Commission was appointed in England to examine and report upon the whole subject. That Commission made its final report in 1886, and, while enumerating a number of important considerations having no connection with the Standard of Value, which appeared to them to account, to a large extent at any rate, for the fall in Prices and depression in trade and industry, added the following remarks (para. 72):—

"We expressed in our third report the opinion that the fall in Prices, so far as it has been caused by an appreciation of the Standard of Value, was a matter deserving of the most serious consideration, and we do not therefore think it necessary to investigate at length the causes which have brought it about. But we desire to give it a leading place in the enumeration of the influences which have tended to produce the present depression."

The Royal Commission which was subsequently appointed "to enquire into the recent changes in the relative values of the precious metals, shown by the decrease in the Gold Price of Silver" dealt with the question of the suggested "Appreciation of the Standard of Value."

A minority of the members of that Commission (five out of twelve) held that there had been an injurious fall in Prices in the United Kingdom, and recommended a return to the joint use of both Silver and Gold as Money. The majority[1] said:—

"We think that the fall in the prices of commodities may be, in part, due to an appre-

[1] The majority was composed of seven members and the minority of five. Mr. Leonard Courtney (now Lord Courtney of Penwith) was one of the majority, but on the question of the effect that the special demands for gold had had on prices he might more properly be classed with the minority. If this were done the members of the Committee would be found to have been equally divided.

ciation of Gold, but to what extent that has affected Prices we find it impossible to determine with any accuracy . . . . . . We believe the fall to be mainly due, at all events, to circumstances independent of changes in the production of, and demand for, the precious metals."

Since the date of that report (1888) the yearly production of Gold has largely increased. It may be taken, approximately, at £28,000,000 sterling in 1888, and as about £60,000,000 in 1900 while it is little, if anything, under £100,000,000 in the present day (1913). Almost simultaneously with this increase in the production of Gold we have experienced a general rise in Prices, a rise in the rates of profit, interest and discount, a marked tendency towards a rise in wages, and a remarkable diminution in unemployment. I do not assert that all these changes are due solely to the large increase in the production of Gold for there have been other causes at work, as there always are, but I find it impossible to believe that, to put it at the lowest, the great increase in the production of Gold has not been the chief cause of the rise in Prices and of what are called the prosperous times which we have experienced in recent years.

To those who hold that the increased production of Gold has had practically no effect on Prices, I would put this question. India is now

taking £20,000,000 of gold yearly; the Arts are believed to absorb as much more. If the yearly production of Gold had remained at £21,000,000, as it was in 1886, would India and the Arts absorb £40,000,000 yearly as they are now doing? How long would they continue to do so? And what would be the ultimate effect on Prices?

The only possible answer is that if the production of Gold had not increased Gold would have become so valuable that neither could India have afforded to hoard £20,000,000 yearly, nor would an equal amount have been used in the Arts. In other words, the general scale of Prices must have been so low compared with what they now are that India would have been prevented from purchasing £20,000,000 yearly in order to hoard it and that the amount of Gold used in the Arts would have been reduced.

It would be impossible for £40,000,000 of Gold to be hoarded and used in the Arts every year when the yearly production is about £20,000,000 without causing a great fall in Prices, and bringing about in a longer or shorter time the total collapse of our Standard of Value. The higher Value of Gold (lower Prices) would no doubt stimulate the search for, and production of, Gold but what effect that cause might have in increasing the yearly production I am unable to say.

In his Essay on "Money," David Hume called attention to the prosperity produced by an unusual increase in the Quantity of Money. Tooke and Newmarch in their History of Prices expressed a similar opinion with regard to the effects both of the influx of Gold and Silver from America in the Fifteenth Century and of the great discoveries of gold in California and Australia in the middle of the Nineteenth Century. In Appendix A will be found the opinion of the late Francis A. Walker, President of the Massachusetts Institute of Technology with quotations from the writings of Hume, Chevalier, McCulloch and Jevons. Also an extract from an address delivered in 1886 by J. Shield Nicholson, Professor of Political Economy in the University of Edinburgh, on the "Effect of Great Discoveries of the Precious Metals" which the author has been kind enough to permit me to reproduce, and which contains quotations from the writings of Tooke and Newmarch.

Having regard to the conclusions to which theoretical reasoning leads, to the history of the past, to the opinions of the eminent Economists to whom I have referred, and to the facts of the present day which are forcing themselves on our attention, I cannot doubt that the supply of Gold has a great effect on Prices, and that a general Rise or Fall of Prices

has a marked influence on human welfare and progress.

To any arbitrary or artificial inflation of the Currency by the action of Governments I am strongly opposed. Such measures in the present state of the world would be abused and would produce greater evils than those they were intended to cure. Whether it will ever be possible to make the Monetary Unit the equivalent of a definite amount of Purchasing Power is a question which may be discussed with advantage, but for any such change the *world is not prepared at the present time.*

Yet the question of the future Standard of Value is one of great importance. Up to the present date the world has aimed, from time to time, at securing the most convenient Medium of Exchange and the Standard of Value has followed as it were by accident.[1] With the linking together of so many countries by the bond of commerce and with so many contracts for the payment of Money into which the element of time enters, the question of the Standard of Value in the future will become one of increasing importance. With a small Gold basis and a vast

[1] The plan of using both Gold and Silver as Money at a fixed ratio was adopted at least 4,000 years ago, but the sole object of doing so was to bring the two Media of Exchange into a definite relation to each other in order to facilitate transactions involving the receipt or *payment* of Money, and *there was no idea of finding* in this way a better standard of value than would be secured by using either Gold or Silver separately.

superstructure of Credit, an increase or diminution in the Quantity of Money is likely to have a greater effect on Prices than it had in the past when the basis was both Gold and Silver, and such changes in Prices will be extended more rapidly over the civilized world owing to the greater magnitude and activity of trade and commerce.

As to a remedy for the possible difficulties of the future I have no proposals to put forward and can only suggest a careful consideration of the whole subject while the question can be treated as an academic one, and before men have taken sides in accordance with their interests or supposed interests.

At the present time there is no urgent necessity to make any change in the world's Standard of Value, and even if the difficulties were greater than they are, or are likely to be for some time, I doubt if any remedy could be devised which would be generally accepted, or to which practical effect could be given. The practice which appears to be growing up of attempting to remedy by Legislation the evils that are due to a rise or fall in Prices is full of danger.

In the future there will, no doubt, be important changes in the yearly supply of Gold as well as in the demand for it for various purposes, and an examination of the effects of such changes in supply or demand when they occur will show

whether the views which I put forward, and which have been previously stated by many others whose names must carry weight, are sound or not. For my part, I can only say that I do not entertain any doubt on the subject.

APPENDIX

I

Extract from "International Bimetallism"

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THE INFLUENCE OF METALLIC INFLATION

I HAVE spoken of the general influence of the great production of gold, after 1850, upon trade, industry, and society, as, on the whole, in spite of individual cases of hardship, highly beneficial. The metallic inflation was most welcome, for it occurred at a time when commerce and production had for a long time been suffering from a money-supply, either positively decreasing, or, at any rate, not keeping up with the world's needs in this respect. The age had been one of falling prices, with loud complaints everywhere of depression in trade and failure of employment. Never did parched ground respond more joyously to the first fall of rain after a long drought, than

industry and trade responded to the new supplies of gold from California and Australia. The normal effects of an inflation of the money-supply of the world due to natural causes, and not to any purposed action of Government in tampering with the standard of deferred payments, has been studied by some of the soundest and wisest of economists; and the general weight of their testimony bears strongly on the side of the advantages derived from such a cause. A natural metallic inflation carries with it no sting of injustice and draws no retribution after it, for it is due either to the discovery of new resources in nature or to improvements in human arts. Being, thus, free from the curse which attends an increase of paper money designed to scale down debts and alter the standard of value, such an inflation can be looked at without prejudice. The subject is one susceptible of great exaggeration. It is also one which may be treated in a small and grudging way, with results as distinctly false to life as any that could be due to extravagance of view and of statement. The truth doubtless lies between the extreme claims of some who have attributed more than a magical and even miraculous virtue to the natural increase of the money-supply and the mean and parsimonious admissions of certain economists of the *a priori* order. But I believe that the truth lies much nearer the former than the latter line. The

weighty argument of David Hume is the first which should be quoted in any discussion of this subject.

"It is certain that, since the discovery of the mines in America, industry has increased in all the nations of Europe, except in the possessors of those mines; and this may be justly ascribed, amongst other reasons, to the increase in gold and silver. Accordingly we find that, in every kingdom into which money begins to flow in greater abundance than formerly, everything takes a new face; labour and industry gain life; the merchant becomes more enterprising, the manufacturer more diligent and skilful, and even the farmer follows his plough with greater alacrity and attention. . . . To account, then, for this phenomenon, we must consider that, though the high price of commodities be a necessary consequence of the increase of gold and silver, yet it follows not immediately upon that increase, but some time is required before the money circulates through the whole state and makes its effects to be felt on all ranks of people. At first no alteration is perceived; by degrees the price rises, first of one commodity and then of another, till the whole at last reaches a just proportion with the new quantity of specie which is in the kingdom. In my opinion it is only in this interval, or intermediate situation, between the acquisition of money and rise of prices that the increasing quantity of gold and silver is favourable to industry. When any

quantity of money is imported into a nation, it is not at first dispersed into many hands, but is confined to the coffers of a few persons, who immediately seek to employ it to advantage. . . . It is easy to trace the money in its progress through the whole commonwealth, where we shall find that it must first quicken the diligence of every individual before it increases the price of labour."—(Essay on Money.)

In the foregoing remarks, Hume understates the advantages of a metallic inflation. In addition to all which he alleges, there is the important consideration of the effect of such a cause upon the burden of existing indebtedness, both public and private. The world is always in bonds to the generations that have preceded. The industry, the activity, the enterprise, of the generation upon the stage are heavily weighted by obligations to the past. These obligations cannot be repudiated, they cannot be intentionally lightened by act of government under impulse from the debtor class, without social and economic retributions which will produce a mischief far outweighing any benefits which may be in view in such ill-advised measures. But when this effect, in no revolutionary degree, is brought about by natural means, I believe it to be wholly beneficial. That the great silver discoveries of the sixteenth and seventeenth centuries, diminishing the weight of

feudal burdens, cutting down the effective revenues of existing dynasties and reducing the weight of obligations derived from the past, had an influence, wholly in addition to that mentioned by Hume, not only in extending commercial activity, but in lifting society and industry up to a new and higher plane, seems beyond question. To show that this view is not without the support of recognized economic authority, I quote the language of M. Chevalier, the first of French Economists, and of J. R. McCulloch, one of the most conservative of the English School.

M. Chevalier says: "Such a change will benefit those who live by current labour; it will injure those who live upon the fruits of past labour, whether their father's or their own. In this it will work in the same direction with most of the developments which are brought about by that great law of civilization to which we give the noble name of progress." Mr. McCulloch has perhaps taken even stronger ground. He declares that, "while, like a fall of rain after a long course of dry weather, it may be prejudicial to certain classes, it is beneficial to an incomparably greater number, including all who are actively engaged in industrial pursuits, and is, speaking generally, of great public or national advantage." With reference to this statement of Mr. McCulloch, Professor Jevons (1868) remarks

(*Investigations in Currency and Finance*): "I cannot but agree with Mr. McCulloch that putting out of sight individual cases of hardship, if such exist, a fall in the value of gold must have, and, I should say, has had already, a most powerfully beneficial effect. It loosens the country, as nothing else could, from its old bands of debt and habit. It throws increased rewards before all who are making and acquiring wealth, somewhat at the expense of those who are enjoying acquired wealth. It excites the active and skilful classes of the community to new exertions."

II

Extract from "The Effects of Great Discoveries of the Precious Metals." [1]

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In the sixteenth century, the new supplies of the precious metals were obtained from Spain, through her discoveries and military successes in America, and were largely squandered in ambitious political schemes in Europe; but in the natural course of things, they soon found their way into the great channels of trade.

At that time, the Netherlands held the commercial supremacy of the world, and Antwerp was the Queen of the Netherlands. It was almost entirely by trade that the Dutch amassed their wealth. The celebrated description of Holland, written about the middle of the seventeenth century, is equally true of the sixteenth. "Never any country traded so much and consumed so little; they buy infinitely, but it is to sell again. . . . In short, they furnish infinite luxury which they never practise, and traffic in pleasures they never taste." It was, then, through the great cities of the Netherlands, with their wide-spread-

[1] Reprinted in *Money and Monetary Problems.*

ing trade connections, that the treasures of Mexico and Peru were diffused over the world, and no one is surprised to hear that Antwerp was the dearest City in Europe.

It would, however, be a great mistake to suppose that, even in the sixteenth century, when credit was comparatively, and, according to our notions, quite undeveloped, this distribution of the new supplies of the precious metals took place, without any other noticeable result than a general rise in prices, accompanied by a natural increase in production. It is easy to speak of a general rise in prices, and of the gradual extension of this rise, but when we descend to details and concrete facts, there is no more difficult problem than to measure such a general rise, and to account for the failure to respond in particular localities and particular commodities. General prices are made up of particular prices, and the relative prices of particular commodities are influenced by a variety of causes which operate on the demand and supply.

In the sixteenth century we find, at the very time when England was beginning to feel the effects of the new treasure, that all the commodities of Greece, Syria, Egypt, and India, were obtained much cheaper than formerly—presumably owing to the fact that, by a direct trade through Turkey, the charges of the Venetian carrier were dispensed with.

At the same time, too, if we refer to contemporary writers on the social state of England, and to the statutes passed by paternal governments to remedy disorders by frantic endeavours to suppress the symptoms, we find side by side, complaints of the decay of certain places and industries, and dismay at what seems the unnatural and dangerous growth of others.

We find that careful and prudent monarch, Queen Elizabeth, aided by still more careful and prudent counsellors, issuing regulations, on the one hand, to check the growth of London by actually prohibiting new buildings, and on the other hand, by granting privileges and monopolies to other towns, to restore their former prosperity. As with places and commodities, so it is with classes—some are prosperous beyond measure, others suffer severely. In the famous dialogue of William Stafford, the knight asks of the doctor, "What sorte is that which yee said should have greater losse hereby, than these men had profit?" And the reply shows for the time a singular grasp of economic principles. "It is all noblemen, gentlemen or others, that live either by a stinted rent or stypend. . . . Therefore gentleman doe study so much the increase of their lands and enhaunsing of their rents, and to take fearmes and partners to their own use, as yee see they doe; and all to seeke to maintain their countenances as their predecessors did, and

yet they came shorte therein. . . . The other sorte be even serving men and men of warre, that having but their olde and stinted wages, cannot finde therewith as they might aforetime without rauin or spoile."

It was peculiarly difficult for the people of that time to estimate the force of discoveries of the precious metals; for, apart from currency causes, influences were at work which were effecting great changes in relative prices, and, consequently in production. Even before the mines of Potosi were discovered, English wool had begun to rise in value, owing to foreign demands; and, as a consequence, great sheep-walks were taking the place of tillage, and the outcry against sheep was as loud and bitter as in the present century in Scotland.

No doubt, however, wool being easily carried, compared with other forms of agricultural produce, felt the influence of the new money most quickly and most effectively. But apart from these and similar causes of variations in value, a general rise in nominal prices had occurred, owing to the debasement of the coinage by Henry VIII. and his son. The effects of this debasement were too obvious to be overlooked, and it was natural for people to expect that, as the abuse was remedied, as it speedily was, by Queen Elizabeth, prices would be restored to their former level. As it happened, however, the new supplies of

silver reached this country in effective amounts just as the coinage was reformed, and consequently prices did not fall.

Before passing from the sixteenth century, let me resume in a few words the general effects of the discoveries.

By a curious coincidence, they were made just at the time when the civilised world was breaking through its mediaeval fetters. The discovery of the new world had given a great stimulus to venturous trading, and the maritime nations were vying with one another in their zeal for appropriating new lands and new treasures; the Church of Rome, which had weighed down individual freedom, not merely in matters of speculative theology, or astronomy, but equally in what we are accustomed to consider matters of practical business, which taught that everything in the form of speculative trade partook of the nature of the deadly sin of usury, which, with its swarms of dependent paupers, was the most gigantic embodiment of the unproductive consumer the world has ever seen, was compelled to relax its hold. The old industrial guilds, which had threatened to entail the trade of the nation, as the nobility had entailed the land, in a few families, and had become, in the words of Bacon, fraternities in evil, found, on the one hand, that the craftsmen were fleeing into the country, and to the towns not oppressed with guild regulations,

and on the other hand that the Government, in the interests of the general public, was determined to curtail their privileges, and, in its own interest, to confiscate their wealth. The guilds, like the church, were discovering that they must yield to industrial freedom and competition; even Queen Elizabeth, in spite of her strong will, had at last to give way in the matter of monopolies. In the country, no less than in the towns, good old customs, which had long since begun to corrupt the world, such as slovenly cultivation in common of old crops and old weeds by old methods, were beginning to yield to individual enterprise, involving, it is true, much hardship and social discomfort, but preparing the way for giving Britain the lead in agriculture; in short, from whatever point it is regarded, the sixteenth century showed signs of the breaking up of an old system, which rested on law, custom and superstition, and the appearance in its place, of the beginning of our modern world, with its freedom of contracts, and freedom of competitions. The mediæval edifice was full of cracks and seams, and the new treasure may be compared to villainous saltpetre, which, finding its way into these cracks, regardless of all respect to antiquity, tumbled down huge fragments and made the whole structure totter. I trust you will not think this metaphor exaggerated, but we are so much accustomed to hear

money spoken of as so many counters—so many units of measurement, that it seems desirable sometimes to point out that money governs prices, and that great movements in prices operate in a convulsive, partial, spasmodic manner, on the interests of various classes, and the stability of various social institutions; that all the production, distribution, and exchange of wealth, rests on prices—the price of land, the price of capital, the price of labour—that, whether we like it or not, the great mass of the nation is most intensely interested in the acquisition and consumption of wealth; and, accordingly, when any great revolution occurs in prices, we are likely to find the most appropriate illustrations of the effects of money, not in children's games of cards, or in the abstractions of the pure mathematician, but in the great forces of nature or art—in earthquakes, tidal waves or gunpowder. Not that I mean to imply that the effects of the discoveries in the sixteenth century were disastrous. On the contrary, there seems to me no reasonable doubt, that if the stock of the precious metals had not been increased, simultaneously with the opening up of new routes to the East and the West, and the growth of individual enterprise, the progress which took place would have been impossible. The metaphors I suggested were intended only to convey an idea of the enormous

power of monetary changes; and that in this case the disturbance was beneficial, we have the authority of the *History of Prices* by Tooke and Newmarch—the most laborious and judicial work on the historical side of Political Economy ever written. It is there asserted, that "we have the fullest warrant for concluding that any partial inconvenience that might arise from the effect of the American supplies of the sixteenth century in raising prices was compensated and repaid a hundredfold by the activity, the expansion and vigour which they impressed for more than one generation upon every enterprise, and every act which dignifies human life, or increases human happiness."

Coming now to the discoveries of the present century—in California in 1848, and Australia in 1851—it is interesting to observe that, just as was the case three centuries before, this was a period of great industrial and social changes, and I cannot do better than again quote from the authors of the *History of Prices*, some weighty remarks on the period between 1848-1856.

"The rapid increase in railways in every part of the world; the improvements in the navigation and speed of ships: the rapid spread of population into new and fertile regions; the quick succession of important discoveries in practical science; and the ceaseless activity with which they are applied to increase the

efficiency of all mechanical appliances; and perhaps, more powerful than all, the setting free of the enterprise, the industry, and the ingenuity of some of the leading commercial states, by the adoption, more or less completely, of principles of Free Trade; are all causes which, singly and conjointly, have assisted to accelerate the rate of progress (but with all this), the influence of the *new supplies of gold*, year by year, has probably been that particular cause, or train of causes, which has modified in the most powerful degree the economical and commercial history of the last nine years."

The principle of the influence is precisely the same as in the earlier period, but the initial stages are different.

In the sixteenth century silver was obtained by the Spaniards through plundering and slaughtering the unfortunate natives whose lands they had occupied, with the ostensible purpose of spreading the truths of Christianity; it was spread over Europe first of all in payment of further ambitious projects, and it was not till in the course of trade it reached the Dutch that its full effects on commerce began to be noticed.

In the nineteenth century, on the other hand, from the outset, commercial influences alone determined the acquisition and distribution of the precious metals. The whole of the complicated processes by which the new gold was distributed over the world, may be explained by one simple

principle. The distribution took place in the precise proportion in which the extended demand for commodities, which originally proceeded from the labourers who picked up the gold, set in motion increased numbers of labourers and increased amounts of capital to supply first the wants of the gold countries, and, secondly, the wants of those who traded with these countries.

Time will not permit me to point out in detail the way in which the great development which had taken place in banking and credit generally, increased both the rapidity and the degree of the influence of the new gold; it is enough to insist on the main result, and that is—*not* that the game of commerce was now played for higher *nominal stakes—for more yellow tokens*—but that the whole industry of the civilized world was quickened with new life, and that the production and consumption of all kinds of real wealth were stimulated. A rise in prices certainly occurred, but the rise was not in many cases in proportion to the increase in the quantity of the precious metals, and it did not merely mean the profit of debtors at the expense of creditors. The new gold was used *not* simply to circulate the same amount of wealth at higher figures, and play the game of trade with more counters, but to circulate more wealth—at higher prices, it is true, but for all that, a greater quantity of real wealth.

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